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## **GOVERNANCE AND THE RETURNS TO INVESTMENT: AN EMPIRICAL INVESTIGATION**

**March, 1996**

**Jonathan Isham, Daniel Kaufmann and Lant H. Pritchett**

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#### **IRIS Summary**

The quality of governance is widely thought to be an important determinant of a country's economic development, but finding empirical evidence of this relationship is a challenge. While many dimensions of "good" governance typically covary (e.g., political stability, transparent rule of law, competent administration, democracy and respect for human rights), they are conceptually, logically and empirically distinct. In this paper, we limit our focus to the effect of two dimensions of governance--a) the degree of civil liberties and b) the political regime type and degree of political liberties--on one observable indicator of economic performance: the returns on government investment projects financed by the World Bank.

The performance of World Bank-financed projects is measured (in sectors where the streams of benefits can be readily quantified) by economic rates of return (ERR). Previous work (Isham and Kaufmann 1996) has established a relationship between the economic policy environment and project ERRs, controlling for exogenous and other structural variables. Using this previously-established model, we use data from 1155 projects to test the effects of selected aspects of governance.

We use data from three recent rankings of civil liberties: the Freedom House index (covering 1972 - 1994), the Humana index (1985), and two indices developed by Coppedge and Reineke (1990). By including each of these measures of civil liberties in the project performance regressions, we show that there is a consistent, statistically significant and empirically large effect of civil liberties on ERRs. On average, improving a civil liberties indicator by one standard deviation increases the predicted ERR by over 3 percentage points (the mean rate of return is 16 percent). The results are qualitatively similar with a binary "satisfactory/unsatisfactory" rating for a larger sample that includes projects in the social sectors.

We argue in two ways that this relationship suggests a causative effect from better civil liberties to better project performance. First, prior work suggests that beneficiary involvement and accountability of implementing officials, two aspects of governance related to civil liberties, are both key elements of project success. Second, we show that indicators of civil unrest, controlling for population, are strongly positively correlated with project performance. This suggests that environments in which civil unrest is possible are also those in which other mechanisms for expression of popular discontent with government performance are available and effective.

To test for the effect of political liberties and regime type, we use the Freedom House measure of political liberties, the IRIS indicator of regime type, and an index of democracy developed by Alesina et. al.. We find that these related aspects of governance do not appear to significantly alter project performance. The Freedom House measure is not robust to the

inclusion of policy controls or regional variables. Weak evidence that democratic regimes tend to have higher returns does not survive the inclusion of regional controls: except for a comparison between the "best" and "worst" regime types, is no clear pattern to the results. These ambiguous findings roughly agree with other assessments of the degree of political freedom on economic performance.

We conclude with a growth accounting exercise that shows that the economic rate of return is related one-for-one to the economy-wide rate of return, suggesting that it is a good proxy for overall investment performance. Overall, we believe that this paper is an additional piece of evidence for the view that increasing public voice and accountability--through both participation and better governance--can lead to greater efficacy in government action, including development assistance. In addition, these microeconomic data suggests that which is known from aggregate data: while some authoritarian regimes have not provided economic benefits, others (particularly in East Asia) have experienced efficacious governments, widespread economic growth, and enormous reductions on poverty.

# Governance and the Returns to Investment: An Empirical Investigation<sup>1</sup>

## Introduction

The quality of governance is widely thought to be an important determinant of a country's economic development (Brautigam 1992)<sup>2</sup>. However, convincing empirical evidence of the effect of governance on performance is scarce, as definitional and measurement issues plague both the evaluation of inputs--what is the appropriate measurement of good governance?--and of outputs--what is the effectiveness of government?<sup>3</sup>. We limit our investigation to just one observable indicator of performance: the returns on investment projects of governments that were financed by the World Bank. We examine the association of this performance indicator to just two limited dimensions of governance: a) the degree of civil liberties; and b) the political regime type and the degree of political liberties. While we find a substantively and statistically significant relationship between investment returns and civil liberties, we find no such connection with any

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<sup>1</sup> Isham: IRIS, University of Maryland. Kaufmann and Pritchett: the World Bank. We would like to thank Deon Filmer and Phil Keefer for helpful comments, as well as seminar participants at Columbia University, the University of Maryland, the North East Universities Development Conference, and the World Bank. One caveat, although standard, deserves special mention given potential sensitivity of the topic: all views presented in this paper are exclusively those of the authors and do not necessarily reflect those of the World Bank. We are grateful for support from the World Bank's Policy Research Department (RPO # 67949) and from IRIS.

<sup>2</sup> For instance, the World Bank's policy statement on governance and development summarizes: "Good governance is central to creating and sustaining an environment which fosters strong and equitable development, and it is an essential component to sound economic policies." (World Bank 1992).

<sup>3</sup> Creating an objective measure of the efficacy of government action is plagued by both normative disagreements about the appropriate aims of government policy and positive disagreements about the instruments empirically likely to achieve any given aim. For example, a government may be very effective (and even cost effective in the limited sense of achieving a given objective) at banning imports; yet this is a policy which many may regard as an ineffective and inefficient (in the broad sense) action for a government to undertake. See Putnam (1993) for ingenious attempts to avoid these problems and measure government efficacy.

of the political variables.

The first section describes the data (particularly the data on project performance), establishes the basic specification of the determinants of project performance excluding governance variables and introduces our classification of governance variables. Despite the serious definitional and measurement problems with each of these indicators (discussed as they arise), we feel that these data are of sufficient quality and interest to merit examination<sup>4</sup>. The second section establishes the positive link between the degree of civil liberties and project performance and argues that this relationship is causal. The third section shows the lack of any association between either political liberties or political regime type. The fourth section discusses the interpretation and implications of the empirical results.

## II. Data description, basic specification and results

### A. Project data

The data on the performance of projects is constructed by the World Bank's Operations Evaluation Department (OED)<sup>5</sup>. After each World Bank loan is fully disbursed--typically 5 to 8 years after the opening of the loan--Bank and borrower country staff write a Project Completion

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<sup>4</sup> We wish to stress that by using these rankings for this cross-sectional exercise neither the authors--nor *a fortiori* the World Bank--place any importance on the ranking for any particular country. Moreover, use of the various figures does not imply any comment on the politics, rights, or practices of any country.

<sup>5</sup> We do not differentiate projects financed by the IBRD (International Bank for Reconstruction and Development) loans, which are relatively "hard" loans at near commercial terms, and IDA (International Development Association) credits, "soft" loans restricted to the poorest countries. Private sector IFC (International Finance Corporation) loans are not included in this analysis.

Report (PCR) to assess project performance<sup>6</sup>. As one part of this assessment, two performance indicators are created. For all project loans, OED staff assign an overall performance indicator on whether the project was 'satisfactory' or 'unsatisfactory' in achieving its development objectives<sup>7</sup>. For those projects in eight economic sub-sectors where the stream of project benefits can be readily quantified and valued--infrastructure, agriculture, industry, energy, water, urban, transport, and tourism--Bank project staff, sometimes in collaboration with OED staff, calculate an economic rate of return (ERR).

The ERR is the discounted stream of project costs and benefits over the life of the project, evaluated at economic (as opposed to financial) prices and calculated following (roughly) the methodology of Squire and van der Tak (1975)<sup>8</sup>. The ERRs are typically calculated about two to three years after project completion and hence are ERRs *ex post* of project implementation, so project evaluators know the actual investment costs (in contrast to *ex ante* ERRs which are calculated when the project is first assessed) and are somewhat better informed about actual operating costs and demand, but evaluators must still estimate most of the future stream of

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<sup>6</sup> The PCR--recently rechristened the Implementation Completion Report--is usually written by a staff member in the division that supervised the loan, but not by anyone with major project responsibilities. As such, the incentives of the staff to dissemble about project performance, while present, are not overwhelmingly strong.

<sup>7</sup> Assessing adjustment lending is a whole other kettle of fish, a kettle which has been fried on several occasions both by the World Bank and its staff (World Bank 1991, 1992, 1993; Pritchett and Summers 1993) as well as others less sympathetic. We exclude adjustment operations from our universe of projects. For a discussion of project performance and adjustment lending, see Isham and Kaufmann (1992).

<sup>8</sup> Little and Mirrlees (1992) discuss the degree of importance of economic (versus financial) pricing in World Bank appraisals and the quality of cost-benefit analysis overall.

benefits<sup>9</sup>

Table 1 shows the average ERR and overall project success ratings by region, from 1974 to 1993. The average ERR was 16.1 percent but varied substantially across regions, from nearly 18 percent in both South and East Asia to only 14 percent in Sub-Saharan Africa. About 73 percent of projects were rated as satisfactory, ranging from 83 percent in East Asia to only 64 percent in Africa.

| Table 1: Summary statistics of project performance (1974-1993)   |                               |                    |  |                    |
|--|-------------------------------|--------------------|--|--------------------|
| Region   | Economic Rate of return (ERR) |                    | Fraction of projects rated as Satisfactory |                    |
| Region   | Average                       | Number of projects | Average                                    | Number of projects |
| All  | 16.1                          | 1824               | 0.73                                       | 3435               |
| South Asia   | 17.9                          | 235                | 0.78                                       | 439                |
| East Asia  | 17.7                          | 340                | 0.83                                       | 588                |
| EMENA  | 17.1                          | 338                | 0.81                                       | 613                |
| Latin America  | 15.5                          | 364                | 0.70                                       | 701                |
| Sub-Saharan Africa   | 14.0                          | 547                | 0.64                                       | 1094               |
| Notes: Includes all projects evaluated by the World Bank's Operations Evaluation Department from 1974 to 1993.<br>Source: Authors' calculations from OED data. |                               |                    |  |                    |

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<sup>9</sup> There is an enormous (and growing) gap between the ERR calculated *ex ante* and *ex post* (between 6 and 10 percentage points on average) and a huge variability between these two measures (the R<sup>2</sup> of regressing *ex post* on *ex ante* ERRs is only about 0.2). The determinants of this gap have been studied elsewhere (Pohl and Mihaljek, 1992). Follow-up studies tend to find that even the *ex post* ERRs tend to overstate the true economic rate of return as in many cases, the benefit flows are not sustained as long as anticipated in the *ex post* ERR calculations.



## B. Specification, estimation, and base results

In this paper, we focus only on the relation between selected aspects of governance and project performance<sup>10</sup>. Nevertheless, we must still account for country structural and policy characteristics which, as previously shown (Isham and Kaufmann 1995, Kaufmann and Wang 1995) are determinants of project success. Accordingly, for each governance variable, we estimate four regression specifications which include various degrees of control variables<sup>11</sup>.

The four specifications are:

A: Only exogenous and/or structural variables: the capital/labor ratio, terms of trade changes, and a dummy for project complexity<sup>12</sup>;

B: Variable set A, plus dummies for the standard World Bank regions: South Asia, East Asia, Sub-Saharan Africa, Latin America, and Europe, the Middle East and North Africa (EMENA);

C: Variable set A, plus possibly endogenous policy and economic outcome variables (which could be correlated with the governance variables): the black market premium,

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<sup>10</sup> An annual publication by OED on evaluation results (e.g. World Bank 1993) uses this data to examine project performance by a number of characteristics. Background papers for the most recent also examined the effect of various country aggregate variables, like inflation (Kilby 1995).

<sup>11</sup> We did not include sectoral dummies in the base case although there are differences across sectors (whether this is due to real differences or methodologies is unclear). Their inclusion does not appear to affect the results as country portfolio composition does not appear to be correlated with the other dependent variables.

<sup>12</sup> The project complexity dummy includes all integrated rural development, irrigation and drainage, and livestock projects. See Appendix 2 in Isham and Kaufmann (1995) for detailed definitions of all exogenous/structural and policy variables used in these specifications.

the fiscal deficit, and GDP growth<sup>13</sup>;

D: Variable set C, plus the regional dummies.

When only structural variables are included (specifications A and B) the estimate of the partial impact of better governance on project performance could be overstated because of omitted variables bias. Conversely, when policy variables are included (specifications C and D), this estimate could understate the true total impact of governance if part of the impact of better governance is through better policies<sup>14</sup>.

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<sup>13</sup> Other variables that would plausibly be related to investment returns, like the level of education and indicators of trade policy (Lopez 1995) were tried. However variables such as the mean years of schooling or the Dollar outward orientation index (Dollar, 1993) were not themselves consistently significant, nor did their inclusion systematically affect the results on our civil and political variables of interest.

<sup>14</sup> If the set of equations for determining the rate of return on project with governance (G), exogenous variables (X), and policy variables (Z) is as above, then the partial effect of governance holding all variables constant (including those that normally would be affected) is just  $\beta$ . The total effect of governance, which includes the effect of governance through its effect on policies (Z), is

The inclusion of the regional dummies, which are obviously exogenous, is simply a robustness torture (for us) test. In order to be persuasive we feel the results should survive the introduction of regional fixed effects; otherwise, the results may simply be capturing some other unmeasured historical, cultural or ideological effect that covaries across regions and is perhaps correlated with both project returns and the governance variables<sup>15</sup>.

### C. Basic results without governance variables

Three econometric issues related to the project evaluation data deserve mention before reporting the ERR regression results without governance variables. First, by OED convention the lowest ERR reported is negative 5 percent. Since this implies the data are truncated from below, unless otherwise noted, the reported regression results use Tobit estimation<sup>16</sup>. Second, the unit of observation is the project, not a country and year. Therefore the time period of the

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$$\begin{aligned} ERR_i &= \beta \cdot G_i + \delta \cdot X_i + \alpha \cdot Z_i + \epsilon_i \\ Z_i &= \gamma \cdot G_i + \eta_i \end{aligned}$$

$$\beta + \alpha \cdot \gamma.$$

<sup>15</sup> We cannot do country fixed effects for the most part since there is insufficient variation in the governance variables (many of which are for a single point in time) to examine the effects. Even for those variables that do have some time series variation, it is very small. For instance, for the Freedom House Civil Liberties index the country fixed effects account for 82 percent of the variance (versus only 13 percent of the variance for the ERR), therefore purging the country effects will simply purge too much information to allow precise identification of the coefficients. Moreover, the problematic measurement issue concerning the exact timing of the impact on project implementation would be exacerbated in modeling the changes over time.

<sup>16</sup> In some econometric circles, the Tobit regression is out of favor because it is non-robust, as its parameter estimates depend on the assumption of normally distributed error term. Since a relatively small fraction of this sample is at the truncation point of -5 percent, the Tobit estimates are quite similar to simple OLS (Greene 1981).

time varying variables, such as black market premium, must be matched to the period relevant to project performance. This is difficult, as the projects are implemented over a long (on average seven years) and variable period and are expected to yield benefits over an extended period as well. While there are arguments in favor of various weights, we use a three year weighted average of the time varying variable, going back from the year in which the project evaluation was done. Third, although the projects vary tremendously in total cost, from \$1.7 million to \$5.7 billion, we do not adjust for heteroskedasticity, as the standard tests did not indicate any conditional heteroskedasticity as a function of project size and we do not weight by project size<sup>17</sup>.

The "base case" regressions--without any governance variable--are presented in table 2. In table 2 and in the tables below, we report p-levels of the test whether the coefficient is zero rather than the usual test (t or chi-square) statistics themselves. The p-level is the significance level at which the null hypothesis could be rejected, hence a p-level less than 0.05 indicates a rejection of the null hypothesis at (at least) the 5 percent level.

The results in table 2 are substantially the same as those of Isham and Kaufmann (1995) and hence will not be discussed in any depth. Most of the results are intuitive: ERRs are lower with a larger capital-labor ratio, greater project complexity, a higher black market premia, and a larger fiscal deficit. In addition, even after controlling for all these factors,

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<sup>17</sup> In a preliminary version of this paper regression results were weighted, but subsequent analysis revealed that the results were not affected by the weighting (and that we had incorrectly computed the weights). Doing the regressions for large and small projects separately (divided at the median) also did not appear to have much impact.

| Table 2: Non-governance determinants of project returns (ERRs): 1974-1987   |                              |  |                              |   |   |
|---|------------------------------|--|------------------------------|---|---|
|   | Specification:               |  |                              |   |   |
|   | A<br>Exogenous               | B<br>Exogenous<br>with region<br>dummies | C<br>Exogenous<br>and policy | D<br>Exogenous, policy, and<br>region dummies |   |
|   |                              |  |                              | Estimates                                     | Effect of<br>one Std.<br>Dev.<br>increase on<br>ERR |
| Exogenous   |                              |  |                              |   |   |
| ln(capital/labor)   | -1.28<br>(.029) <sup>a</sup> | -1.73<br>(.050)                          | -1.34<br>(.024)              | -1.39<br>(.122)                               | -1.41   |
| Dummy for project<br>complexity   | -5.80<br>(.0001)             | -5.81<br>(.0001)                         | -4.99<br>(.0003)             | -5.06<br>(.0002)                              | -2.12   |
| Terms of trade shock  | 0.086<br>(.278)              | 0.096<br>(.218)                          | 0.064<br>(.417)              | 0.077<br>(.316)                               | 0.57  |
| Policy  |                              |  |                              |   |   |
| Black market premia   |                              |  | -0.046<br>(.0001)            | -0.040<br>(.0001)                             | -3.58   |
| Fiscal deficit  |                              |  | 0.178<br>(.194)              | 0.229<br>(.116)                               | 0.80  |
| GDP growth  |                              |  | 0.233<br>(.272)              | 0.056<br>(.799)                               | 0.19  |
| Regional Dummies <sup>b</sup>   |                              |  |                              |   |   |
| East Asia   |                              | -0.61<br>(.791)                          |                              | -2.69<br>(.246)                               |   |
| Latin America   |                              | -3.85<br>(.140)                          |                              | -4.90<br>(.065)                               |   |
| EMENA   |                              | -6.13<br>(.036)                          |                              | -5.51<br>(.071)                               |   |
| Sub-Saharan Africa  |                              | -8.54<br>(.0001)                         |                              | -9.12<br>(.0001)                              |   |
| Notes: a) p-levels in parenthesis, b) based on World Bank regional classifications, c) standard deviations are calculated for the entire sample. Sample size = 761. Source: Authors' calculations |                              |  |                              |   |   |

ERRs are substantially lower in Sub-Saharan Africa and modestly lower in Latin America and EMENA<sup>18</sup>.

Since we focus on the impact of governance variables, we will as a presentational matter only report the coefficients of the various governance indicators when added to these four base specifications rather than repeat all the results for each control variable for each regression. Little of substance is lost in not repeating these results: none of the coefficients on any of the variables above--including the black market premia and fiscal deficit--change dramatically or interestingly with the inclusion of any of the governance indicators<sup>19</sup>.

#### D. Measuring governance

Discussions of governance typically generate more rhetorical heat than empirical light, as politics, like religion, is a topic where beliefs are strong and reliable empirical measurement is difficult. Even a consensus on definitions is elusive: what does one mean by governance or especially good governance?<sup>20</sup> We argue that the quality of governance can be evaluated along

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<sup>18</sup> The regional definitions are based on the (then) standard Bank groupings into Latin America and Caribbean, Sub-Saharan Africa, South Asia, East Asia, and the somewhat mixed bag of Europe, Middle East and North Africa (EMENA).

<sup>19</sup> One final econometric note: in order not to sacrifice too many observations when the non-governance control variables are missing, we imputed the mean value for missing observations on the fiscal deficit and then included in the estimation a dummy variable interacted with these variables for those observations for which the data are imputed. At least in the case where the independent variables are uncorrelated, this procedure produces consistent estimates for the variables with imputed missings (by packing the impact of measurement error due to imputation onto the interactive term) and at least potentially improves the efficiency of estimation of the governance variables by not throwing out any observations with data on governance because of missing values of the control variables.

<sup>20</sup> For instance, the World Bank's policy paper defines governance as the manner in which power is exercised in the management of a country's economic and social resources for development. (World Bank 1992), which does not lend itself to quantification.

at least the following three dimensions: accountability (including legitimacy, institutional pluralism and participation), openness and transparency, and predictability and the rule of law (Brautigam, 1992). Even though the many dimensions of good governance typically covary (e.g., political stability, transparent rule of law, competent administration, democracy and respect for human rights often appear together), they are conceptually, logically, and empirically distinct. There are clearly examples of effective but non-democratic governments (e.g. some East Asian countries), democratic but corrupt governments (e.g. some South Asian countries), and democratic governments which abuse human rights (e.g. some Latin American countries). As an extreme example, the United States was inarguably a democracy in the ante-bellum period, yet it tolerated the most egregious of human rights violations: slavery.

In spite--and because--of all these definitional difficulties, we isolate for analysis only two of the many possible elements of governance: the extension of civil liberties; and the extension of political liberties and type of political regime. As noted, these are regrettably but (we feel) necessarily narrow aspects of governance. We are ignoring a number of other potentially interesting factors, including governmental policy-making (Haggard and Webb 1994) and direct measures of government accountability (Paul 1992, 1994), and we only briefly examine the effects of political instability (Alesina and Perroti 1993) and government performance as measured by private rating services for foreign investors. (Mauro 1995, Knack and Keefer 1995). We emphasize the civil and political dimensions for three, mostly pragmatic, reasons: first, they are at least plausibly quantifiable and empirical measures do exist; second, they (albeit imperfectly) span the three dimensions listed above--accountability, openness, and the rule of law; and third, these same indicators of civil and political liberties are increasingly being tested in cross-country

growth regressions.

## II) Civil liberties and project performance

### A) Indicators of civil liberties

Developing a meaningful cross-country indicator of civil liberties is obviously difficult. There is little international consensus on liberties that ought to be permitted, and when the most fundamental liberties are suppressed, they are often suppressed surreptitiously. Nevertheless, several large efforts have attempted to rank countries by degree of civil liberties. In this study, we use data from three of these efforts:

- \* Freedom House (1994 and previous years) has constructed a ranking of civil liberties for 165 countries from 1972 to 1994<sup>21</sup>. This ranking--on a seven point scale--is based upon a fourteen item checklist of civil liberties<sup>22</sup>;
- \* Humana (1986) constructed an index of human rights achievement in 89 countries for the year 1985. This index, on a scale of zero to 100 (actual range is 13 to 98) was based upon the definition of human rights adopted by the General Assembly of the United Nations in 1966 under the International Covenant on Civil and Political Rights<sup>23</sup>;

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<sup>21</sup> This index is more commonly known as the Gastil index, after its originator (Gastil 1987).

<sup>22</sup> The fourteen items are: media free of censorship; open public discussion; freedom of assembly and demonstration; freedom of political organization; nondiscriminatory rule of law in politically relevant cases; free from unjustified political terror; free trade unions and peasant organizations; free businesses and cooperatives; free professional and other private organizations; free religious institutions; personal social rights (e.g. property, internal and external travel); socioeconomic rights; freedom from gross socioeconomic inequality; and freedom from gross government indifference or corruption.

<sup>23</sup> This includes such items as the right of peaceful assembly, freedom of opinion and expression, the right and opportunity to take part in the conduct of public affairs, the right to freedom of opinion and expression,



\* Coppedge and Reinicke (1990) constructed five series on polyarchy in 170 countries for the year 1985<sup>25</sup>. We use two of these, "media pluralism" and freedom to organize as indicators of two fundamental civil liberties related.

While each of these indices of civil liberties are subjective and debatable, their cross correlations are reasonably high, which creates some confidence that they measure the same thing and do so reasonably well (although we note that, since Coppedge and Reinicke used the Freedom House and Humana studies in their own ranking procedure, part of the high correlation between the latter two and former two series is by construction)<sup>26</sup>.

#### B) Civil liberties and project performance

Table 3 shows the results of including each of the measures of civil liberties in the project performance regressions. There is a consistent, statistically significant and empirically large

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and the right to form trade unions.

<sup>25</sup> "The set of institutional arrangements that permits public opposition and establishes the right to participate in politics" (Coppedge and Reinicke 1990). The other series are "fair elections", "extension of suffrage", and "freedom of expression". We do not report the results on these series because they either have less variance and/or capture political freedoms. Consistent with reports reported below on political indicators, they are in no case statistically significant across specifications.

<sup>26</sup> The correlations amongst the civil liberties measures are: Freedom House (average 1979-86) and Humana .83, Freedom House and Organize, .78, FH and Media .81, Humana and Organize .68, and Humana and Media .79, and Organize and Media .82. If the different observations on civil liberties, say A (Freedom House) and B (Humana) differ only by independent measurement error and the measurement error variance is equal  $\sigma_{\epsilon_A}^2 = \sigma_{\epsilon_B}^2 = \sigma_{\epsilon}^2$  then a correlation of .8 implies the ratio of measurement error (noise)

to the variance of the true variable (signal),  $\frac{\sigma_{\epsilon}^2}{\sigma_x^2}$  is about .2.

effect of civil liberties on the return to projects<sup>27</sup>. Taking the estimates from specification D, if the Freedom House civil liberties index were to improve from the worst (1) to the best (7, as in Costa Rica for all evaluated years), the ERR is predicted to increase by 7.5 percentage points. Similarly, with the estimates using the Humana index, improving from the worst civil liberties (13) to one of the best (91, as in Costa Rica) would improve the ERR by 22.5 percentage points.

Since these civil liberties indices are on a different scale, a more standard method for comparison is to calculate how much the ERR is predicted to increase if each index were improved by one standard deviation (column 5). An increase of this magnitude in the Freedom House index would raise the predicted ERR by 1.6 points; a similar increase in the Humana index would raise the ERR by 5.2 points; a standard deviation increase in media pluralism would improve the predicted ERR by 3.1 points. These are empirical large, as the average civil liberties effect across the four measures (3.14) is larger than that of any of the other control variables, and roughly the same magnitude as the black market premium (3.58, see table 2).

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<sup>27</sup> For the Freedom House and the Coppedge and Reinicke indicators, we have reversed the scales for comparability. Thus, for all indices, a higher value represents more liberties.

| Table 3: Impact of civil liberties on project rates of return   |                              |                |                |                 |  |
|---|------------------------------|----------------|----------------|-----------------|--|
|   | Specification <sup>a</sup> : |                |                |                 | Effect of one std. dev. increase on ERR <sup>d</sup> : |
|   | A                            | B              | C              | D               |  |
| Freedom House Civil (1978-1987) <sup>b</sup> (N=649)  | 1.81<br>(.0005) <sup>c</sup> | 1.16<br>(.079) | 1.71<br>(.002) | 1.07<br>(.114)  | 1.57   |
| Humana (1982-1985) (N=236)  | .290<br>(.003)               | .299<br>(.007) | .296<br>(.002) | .289<br>(.013)  | 5.19   |
| Media pluralism (1983-1987) (N=448)   | 4.61<br>(.0001)              | 4.45<br>(.002) | 3.66<br>(.001) | 3.43<br>(.026)  | 3.12   |
| Freedom to organize (1983-1987) (N=448)   | 3.17<br>(.0001)              | 1.81<br>(.184) | 2.41<br>(.006) | -0.26<br>(.854) | 2.70 <sup>e</sup>                                      |
| Notes: a) for description of the specifications see table 2; b) Annual values from 1978-87. The other three indices are single values extrapolated to cover the listed time period; c) p-levels in parenthesis; d) for the calculation in column V, the standard deviations--for the entire sample for which each variable is available--are 1.47, 17.97, 0.91 and 1.12 respectively (see appendix table A1.1); e) uses estimate from column C. Source: Authors' estimates. |                              |                |                |                 |  |

This finding of a positive relationship between civil liberties and ERRs is the central positive finding of our paper. We complete this section by showing the statistical robustness of this finding; we argue in the following section that it is plausible that better civil liberties actually are a factor in producing better projects.

One possible concern with the econometric results above is that they are driven by a few outlying observations, as some projects have very high estimated rates of return (see appendix table A.2).. We have dealt with that problem in two ways. First, in addition to a Tobit

specification accounting for the lower truncation, we truncated the ERRs above at the more or less arbitrary level of a 50 percent rate of return. This truncation did not affect the results.

Second, we in addition to Tobit, we estimated specification D using quantile (median) regression, a technique that is robust to extreme observations. Again, all the civil liberties variables that were significant in specification D in table 3 were also statistically significant using median regressions.

The results are also qualitatively similar with the binary satisfactory/unsatisfactory rating. Using only this rating as the measure of project performance allows a larger sample of projects, as social sector projects that normally do not receive an ERR are rated by OED<sup>28</sup>. Table 4 reports the estimates of a Probit regression for specifications C and D (results for A and B were similar). Naturally, since the binary indicator discards a great deal of statistical information, these results are less precise: the p-levels are lower, and the estimates for the Humana ranking are insignificant. For the other variables, the estimates show large increases in the likelihood of a good project when implemented under higher civil liberties. For instance, at the mean of the Freedom House variable, a one standard deviation increase in civil liberties would lower the probability of an unsatisfactory project by 3.2 percentage points, which reduces the predicted failure rate by 16 percent (from the mean of 20 percent). Similarly, a one standard deviation improvement in media pluralism would reduce the failure rate by almost 5 percentage points, or 25 percent<sup>29</sup>.

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<sup>28</sup> See Kaufmann and Wang (1995) for a discussion of the performance of social sector projects as a function of macroeconomic policies.

<sup>29</sup> The magnitudes of the effects are roughly similar. That is, if we created a dummy variable for unsatisfactory based on the ERR falling below 10 percent, then the marginal change in probability of failure from the linear model at a particular point (if the error term were normal) would be  $\beta/\sigma*\phi(.)$ , where  $\beta$  is the slope coefficient,  $\sigma$  is the error standard error, and  $\phi(.)$  is the standard normal pdf evaluated at a particular

| Table 4: Impact of civil liberties on the probability of a project being rated as satisfactory, using Probit regression.  |  |                 |
|---|--|-----------------|
|   | Specification:                           |                 |
|   | C  | D               |
| Freedom House Civil (1978-90) <sup>b</sup><br>N=1155  | .018 <sup>c</sup><br>(.056) <sup>d</sup> | .022<br>(.060)  |
| Humana (1982-86)<br>N=604   | -.00067<br>(.589)                        | .0012<br>(.388) |
| Media pluralism (1983-90)<br>N=740  | .022<br>(.296)                           | .054<br>(.045)  |
| Freedom to organize (1983-90)<br>N=740  | .042<br>(.009)                           | .040<br>(.085)  |
| Notes: a) for description of the specifications see table 2, b) Annual values from 1978-87 while for the other three indices are single values for the listed time period; c) the value reported is not the Probit coefficient, but the marginal change in the probability of a successful project as the variable changes, evaluated at the means of all independent variables; d) p-levels of the test that the Probit coefficient is zero in parenthesis.<br>Source: Authors' calculations |  |                 |

A second aspect of robustness is the robustness of the results to the particular specification. In particular, there are any number of variables one could imagine might play a role in the determination of project performance. Besides those reported in table 2, we experimented with the inclusion of education and an indicator for trade policy, neither of which had any impact on our coefficient. We also experimented with measures of government corruption and found, similar to others (Mauro 1994, Kilby 1995), a significant partial correlate of ERR in some specifications, but this did not affect the civil liberties results.

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point. Taking the values from the regressions in table 3, the means of ERR from table 1, and an estimate of  $\sigma$  (appendix table A.2) gives the change in failure probability derived from the linear model as  $.0266 = 1.07/14.7 * \phi((16.1-10)/14.7)$  (specification D) and  $.042 = 1.71/14.7 * \phi((16.1-10)/14.7)$  (specification C) which are slightly higher than the probit estimates of .022 (D) and .018 (C).

Similarly when we included socio-political instability, as proxied by an index (Alesina and Perotti 1993) and by regular and irregular executive transfers (Taylor and Jodice 1983, supplements), we found some impact in selected specifications but no appreciable impact on the estimates for civil liberties.

### C) Civil liberties and project performance: Disentangling causality

This empirical relationship between performance of projects and civil liberties is striking. Yet the interpretation of this (or any) partial correlation is problematic: it may well be that some country conditions cause both greater civil liberties and better projects. We suggest two pieces of evidence consistent with a causative effect from better civil liberties to better project performance.

First, a causative effect is consistent with other findings about the determinants of public sector effectiveness. For instance, there is increasing evidence that involvement of potential beneficiaries in government investment projects is key to their success (e.g. World Bank 1995, Korten and Siy, 1988, Isham, Narayan and Pritchett, 1995). It is likely that beneficiary involvement in projects is greater in countries which score higher on a ranking of civil liberties as at least six of the 14 elements of the Freedom House civil rights index, for example, are directly compatible with beneficiary participation in projects: media free of censorship, open public discussion, freedom of assembly and demonstration, free trade unions, peasant organizations, businesses or cooperatives, free professional or other private organizations, and freedom from gross government indifference or corruption. In addition, the few empirical studies of accountability that exist suggest that the degree to which public sector

employees are responsible to citizens is an important dimension to performance (Wade 1994, Paul 1996)<sup>30</sup>. Greater accountability of public sector officials are facilitated by an environment in which basic civil liberties--such as the freedom to speak out and the ability of groups to organize to protect and advance their interests--are recognized.

A second intuitive argument for a causal mechanism running from civil liberties to project performance is a chain that runs from civil liberties through indicators of civil unrest to project performance. The data suggest that, controlling for population, higher indicators of civil strife, such as an increased numbers of riots, protest demonstrations and strikes, are strongly *positively* correlated with project performance. Table 5 shows that countries in the high ERR category had average rates of return twice as high as those countries in the low ERR category but that interestingly, these high ERR countries had many more riots, demonstrations and strikes per capita (adjusted for population effects) than countries with poor project performance<sup>31</sup>.

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<sup>30</sup> In an extreme example of accountability, Dreze and Sen (1991) argue that no major famine has ever happened in a country with a free press. They postulate that free flow of information forces even non-democratic governments into actions to prevent economic catastrophes such as famines.

<sup>31</sup> The civil unrest variables (riots, protest demonstrations, and strikes.) came as number of incidents per country per year (Banks 1979, updates). This meant that countries with larger populations had a greater absolute number of incidents. However, it did not seem right to simply normalize to per capita, as there is plausibly some increasing returns to scale in civil unrest. Consequently, for each of the three variables we regressed the absolute number of incidents on  $\ln(\text{population})$  (which is equivalent to adjusting the per capita level for the total population in semi-log form) and report the residual of this regression as excess civil unrest over the amount expected for a given level of population. The population adjustment was also very significant and the R-squared varied from .02 (strikes) to .18 (riots). The results reported below were unchanged by using other concave functional forms in place of this semi-log form.

| Table 5: Impact of civil strife variables on ERRs   |                       |                              |                   |                        |
|---|-----------------------|------------------------------|-------------------|------------------------|
|   |                       | Riots <sup>iv</sup>          | Political Strikes | Protest Demonstrations |
| <i>Deviation from numbers of events from population adjusted level by ERR category</i>  |                       |                              |                   |                        |
| High (avg. ERR=22.2, n=6) <sup>v</sup>  |                       | 2.48                         | 3.19              | .30                    |
| Medium (avg. ERR=17, n=11)  |                       | 0                            | -.02              | .16                    |
| Low (avg. ERR=11.2, n=11)   |                       | -.19                         | -.23              | -.04                   |
| <i>Correlation of population adjusted level with:</i>   |                       |                              |                   |                        |
| Freedom House (Civil)   |                       | .27<br>(.00001) <sup>v</sup> | .34<br>(.0001)    | .17<br>(.0001)         |
| <i>Coefficient of including the variable in specification C <sup>v</sup></i>  |                       |                              |                   |                        |
| without Freedom House (Civil)   |                       | .42<br>(.040)                | 1.67<br>(.097)    | .81<br>(.003)          |
| with Freedom House (Civil)  | Civil Strife variable | .21<br>(.34)                 | .45<br>(.683)     | .68<br>(.013)          |
|   | Freedom House Civil   | 1.51<br>(.093)               | 1.61<br>(.006)    | 1.48<br>(.006)         |
| Notes: a) ERR categories are determined by average rates of return classified by country for all countries with at least 10 projects over the period from 1974-1987. b) indicators of civil unrest per capita, adjusted for total population size, as described in footnote 28; c) for a description of the specifications, see table 2.<br>p-levels in parenthesis; Sample size = 649. |                       |                              |                   |                        |

That greater civil unrest is associated with *better* projects appears at first to be puzzling. Typically, such manifestations are thought to be associated with worse performance. However, all the projects in this analysis are financed by governments; civil tension may be an indication of citizen's ability to influence government's behavior, and possibly leads to better project choice and implementation. While markets for private goods rely on information from



consumers (expressed in the form of the aggregation of individual purchase decisions made in the market), governments must rely on other channels for expressions of citizen's preferences and for the monitoring of the performance of government agents in carrying out their functions. It may be that with more open channels, all forms of expression of popular will--including civil unrest--are higher. Indeed, as the second part of table 5 shows, greater civil liberties are strongly associated with greater degrees of civil unrest.

The third part of table 5 shows that in specification C there is a modest positive effect of various indicators of civil unrest on project returns. Even controlling for our set of exogenous and policy variables, the number of riots, protest demonstrations, and political strikes are *positively* and significantly related to the ERR. However, with the addition of any of the indicators of the degree of civil liberties, the impact of political manifestations is sharply reduced in magnitude<sup>32</sup>. For instance the coefficient on riots falls from 0.42 to 0.21 and on strikes falls from 1.67 to 0.45. That is, for any given level of civil liberties, neither riots nor strikes are associated with better performance (although protest demonstrations seem to still have some independent affect). The results support a chain of causation that runs from greater civil liberties to higher levels of the citizen's involvement--including civil manifestations--and to better projects. This is not to suggest that civil unrest is itself the mechanism: it is more likely that environments in which civil unrest is possible are also those in which other mechanisms for expression of popular (dis)content with government performances are available and effective.

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<sup>32</sup> Only the Freedom House civil indicator is shown in table 5, but the results for the other three are similar.

#### IV) Political regime type, political liberties and project performance

Civil and political liberties are undoubtedly associated with each other and with democratically-elected governments. Yet there is a clear analytical distinction among these two types of liberties and the type of political regime: for example, the degree of civil and political liberties varies widely among non-democracies. Therefore, finding that more civil liberties are associated with better ERRs does not imply that different types of political regimes are associated with better performance. To try to disentangle these relationships, we test for the possible association between ERRs and these two related aspects of governance: political liberties and political regime type.

##### A) Political liberties

The most widely used measure of political liberties is an index, also published by Freedom House, based on 11 indicators of political rights<sup>33</sup>. Like the ranking of civil liberties, it is a subjective ranking from 1 to 7. The results reported in table 6 do not show any striking positive impact of the more strictly political rights on ERR. The Freedom House index shows a significant positive effect in the least demanding specification (A), but whereas civil liberties is robust, the political result is not. It is driven out in significance by the policy controls and, in both magnitude

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<sup>33</sup> The eleven are: chief authority recently elected by a meaningful process; legislature recently elected by a meaningful process; fair election laws; fair reflection of voter preference in distribution of power; multiple political parties; recent shifts in power through elections; significant opposition vote; freedom from domination by the military, foreign powers, and other powerful groups; no major group or groups denied reasonable self-determination; decentralized political power; and informal consensus (de facto opposition power).

and significance, by the inclusion of regional variables<sup>34</sup>.

| Table 6: Political liberties, political regime type and ERR  |                              |                 |                 |                 |
|--|------------------------------|-----------------|-----------------|-----------------|
|  | Specification <sup>a</sup> : |                 |                 |                 |
|  | A                            | B               | C               | D               |
| Freedom House (Political) <sup>b</sup><br>(N=649)  | 1.16<br>(.0087) <sup>c</sup> | -.016<br>(.977) | 1.05<br>(.026)  | -.115<br>(.840) |
| IRIS Indicator of Regime Type (IIRT) (1974-1987 <sup>b</sup> ; N=725)<br>Dummy variable by regime type (default is least democratic, IIRT=1)   |                              |                 |                 |                 |
| IIRT=2   | -0.48<br>(.767)              | -0.56<br>(.733) | 0.24<br>(.885)  | 0.49<br>(.766)  |
| IIRT=3   | 5.46<br>(.107)               | 1.61<br>(.636)  | 3.52<br>(.296)  | 1.04<br>(.757)  |
| IIRT=4   | -0.076<br>(.967)             | -3.68<br>(.058) | -0.82<br>(.657) | -3.35<br>(.091) |
| IIRT=5 (most democratic)   | 3.94<br>(.055)               | 0.322<br>(.892) | 4.17<br>(.043)  | 0.458<br>(.847) |
| Alesina democracy index (ADI) (1974-1982 <sup>b</sup> ; N=369)<br>Dummy variable by democracy level, default is least democratic (ADI=3)   |                              |                 |                 |                 |
| ADI=2  | 3.10<br>(.225)               | 2.86<br>(.257)  | 2.38<br>(0.349) | 2.41<br>(.345)  |
| ADI=1 (most democratic)  | 2.93<br>(.117)               | -1.27<br>(.542) | 1.93<br>(.311)  | -1.52<br>(.465) |
| Notes: a) for description of the specifications see table 2; b) Annual values from 1978-1987. IHRV is a single value extrapolated to cover 1980-1986; c) p-levels in parenthesis.<br>Source: Authors' calculations |                              |                 |                 |                 |

The first indicator of regime type, developed by the Center on Institutional Reform and the Informal Sector (IRIS) and labeled here as the IRIS Indicator of Regime Type (IIRT), places countries annually in one of five classes: democracy (IIRT=5), partial democracy; transition

<sup>34</sup> In an earlier version of the paper we also experimented with an index of human rights violations based on Amnesty International reports (Pourgerami 1988). This variable also showed no clear association with ERRs.

regime, partial autocracy; and autocracy (IIRT=1). Matched with our project/policy data set, this includes annual observations from 1974-1987 for 51 countries. Since this indicator of different regime types is not (necessarily) a cardinal variable, we include a dummy variable for each type. The second indicator, constructed by Alberto Alesina et. al. (Alesina et al. 1992) and labeled here the Alesina Democracy Index (ADI), is an annual ranking of countries by democratic status on a scale of one (most democratic) to three. We use the annual observations from 1974-1982 for 48 countries.

The results from including either of these two measures of political regime type in the base specifications are emphatically ambivalent (table 6). The lowest ranking group of countries by IIRT, the "autocracy", tends to have a lower ERR than other categories (as evidenced by the positive signs for most of the others). In specifications A and C (without regional dummies), IIRT categories 3 and 5 (most democratic) tend to have higher returns, while in specification D none of the differences are empirically or statistically significant. Using the ADI, we also find in specifications A and C some weak evidence that more democratic regimes tend to have higher returns, but this is reversed by the inclusion of regional controls.

Moreover, except for a comparison between the best and "worst" regime type, there is no clear pattern to the results. For instance, the increment to returns over the autocracies is nearly as high when IIRT=3 as when IIRT=5, and countries with IIRT=4 (partial democracy) are predicted to have an ERR *lower* by 3.4 percentage points than even autocracies. The most democratic (ADI=1) countries are also predicted in specification D (at a very low level of

significance) to have lower returns than autocracies.<sup>35</sup>

These findings roughly agree with other assessments of the degree of political freedom on aggregate economic performance. There is a sizeable literature which examines the impact of "democracy" on aggregate growth (e.g. Weede 1983, Scully 1988, Helliwell 1992, Barro 1994, Bhalla 1994, see Alesina and Perotti, 1994 for a review), much of which uses the Freedom House index of political liberties<sup>36</sup> as the measure of democracy. While it is quite difficult to reconcile the strikingly different findings of these papers, in spite of the fact they use almost identical dependent variables (economic growth) and measures of political freedom, we think a fair summary of the current state of the macro level literature on economic growth and political freedom would be involve five findings.

First, higher *levels* of income are associated with higher *levels* of the Freedom House index of political liberties. Second, when some covariates are added, the *level* of the Freedom House index of political liberties does not have independent explanatory power for *growth* of per capita income. Third, controlling for reverse causation--from economic growth (hence higher levels of income) to political liberties--reduces the estimated effect of political liberties on growth. Fourth, the effect of political liberties on growth seems to be non-linear, the middle levels of the index (e.g East Asia) have higher levels of growth than either very low (e.g. OECD) or very high (e.g. Africa) levels. Fifth, as with nearly all growth regressions, a great deal depends on how the

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<sup>35</sup> These ambiguities with respect to political regime type mirror the results in Clague *et. al.* (1996), which looked at political regime types and growth.

<sup>36</sup> Or the sum of the two Freedom House indicators. Two other studies--(Kormendi and Meguire 1985, Greir and Tullock 1989)--use dummies based on the Freedom House civil index in cross-country growth regressions.

newly industrializing economies of East Asia are treated. This is especially important for political questions, as the East Asian countries were by and large modestly authoritarian but had very rapid growth.

#### B) Civil and political liberties together

These weak results on the importance of political liberties are the result of introducing the political variable into the base specification without any indicator of civil liberties. If we ask what the effect of political liberties are, conditional on the level of civil liberties, we find the even stronger finding that the civil liberties indicators retain all of their importance while the Freedom House political liberties variable produces weak, or even negative results. Table 9 shows that, controlling for civil liberties raising political liberties actually reduces the ERR. While not too much should be read into these results (as the multicollinearity problems involved with the estimation of the variables together are severe, the correlation of the two variables is .89) these do strengthen the interpretation that civil liberties and not more strictly political features of governance are of primary importance in explaining project returns.

| Table 7: Estimated impact of political liberties on project returns (ERR) while introducing civil liberties variables. |  |                                 |                  |                           |                               |
|--|--|---------------------------------|------------------|---------------------------|-------------------------------|
|  | Civil liberties variable included in specification D |                                 |                  |                           |                               |
|  | None <sup>a</sup>                                    | Freedom House (Civil) (1978-87) | Humana (1982-85) | Media Pluralism (1982-87) | Freedom to Organize (1982-87) |
| Freedom House (Political)  | -.115<br>(.840) <sup>b</sup>                         | -2.35<br>(.013)                 | -1.44<br>(.241)  | -1.17<br>(.175)           | .040<br>(.967)                |
| Civil liberties variable   |  | 3.33<br>(.0033)                 | .365<br>(.006)   | 4.53<br>(.009)            | .216<br>(.906)                |
| ADI=2  | 2.68<br>(.193)                                       | 2.73<br>(.181)                  | 1.52<br>(.710)   | .551<br>(.839)            | 1.42<br>(.613)                |
| ADI=1 (most democratic)  | -1.23<br>(.498)                                      | -3.26<br>(.105)                 | -6.75<br>(.091)  | -4.03<br>(.106)           | -3.48<br>(.177)               |
| Civil liberties variable   |  | 1.77<br>(.018)                  | .364<br>(.002)   | 3.76<br>(.015)            | .785<br>(.621)                |
| N  | 649  | 649                             | 236              | 448                       | 448                           |
| Notes: a) same regression as table 6, b) p-levels in parenthesis.  |  |                                 |                  |                           |                               |

#### V. What do the rates of return indicate?

We have established two empirical results: higher levels of civil liberties are associated with better performance on World Bank-financed projects, and purely political liberties and the type of political regime are not associated with better project performance. How should these findings be interpreted?

So far, we have used project ERRs as an indicator without being specific about exactly what they are an indicator of. Since the World Bank finances only a fraction of aid-financed projects--and an even smaller fraction any particular government's investment portfolio--it cannot

be assumed that the ERRs of Bank projects are representative of overall government returns. Do these results apply to all aid-financed projects? Is performance of government-implemented projects a proxy for overall government efficacy? More broadly, does the return on these aid-financed government projects reflect the return to all investments? We address these questions in turn.

As to the first, there is little reason to believe that World Bank-financed projects are chosen very differently than projects of other donor agencies. Moreover, it is particularly unlikely that the selection process for projects at the World Bank is biased in such a way as to produce results for a relationship between projects and governance that would not apply to projects of other donors.

The more difficult and important question is whether the ERRs of World Bank- financed projects indicate a degree of the efficacy of government across countries. There are arguments for and against this supposition. On the one hand, since all countries are treated roughly alike by the World Bank in terms of project selection and fund availability, it is likely that systematic differences in project returns do reflect country specific, rather than Bank specific factors. The Bank is quite centralized and the internal standards for project selection, appraisal, review, implementation and supervision are uniform across countries<sup>36</sup>. In addition, in the determination of lending allocation--especially of soft IDA loans--there are pressures for an allocation across countries based on considerations other than expected performance of projects. Finally, the World Bank's Articles of Agreement have always been interpreted in such a way as to prevent an

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<sup>36</sup> This was even more true in the period preceding the reorganization of 1987 which decentralized to the regions many formerly central functions.



explicit consideration of political factors so that project selection at least in theory should have been exogenous with respect to the variables we are considering. Together, these factors suggest that differences in ERRs across countries probably do not reflect large differences in Bank treatment nor in project selection. Rather, it is likely that these differences reflect real differences in government investment returns across countries.

On the other hand, this representativeness cannot be established with any certainty. Countries choose which of their possible set of projects to finance through the World Bank. This choice may involve cream skimming --governments seeking Bank financing for projects with very high expected ERRs--or laggard dumping --governments offering the Bank the most problematic projects. To the extent that the mechanism whereby the government and the Bank agree on which projects will be financed differs across countries, the average return across countries cannot be interpreted as reflecting government performance.

The most worrisome fact against an interpretation of ERRs as an indicator of government efficacy is their lack of a strong correlation with other measures of government efficacy. For instance, the Business Environmental Risk Intelligence (BERI) and International Country Risk Guide (ICRG) data rank countries by various characteristics that indicate their attractiveness for foreign investment<sup>37</sup>. These various measures are not significantly correlated with the ERRs in our data set; they are not good measures of the same thing. It is possible that these private sector ratings are flawed indicators of government effectiveness, as they are designed for foreign

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<sup>37</sup> BERI includes indices on bureaucratic delays, contract enforceability, and infrastructure quality. ICRG includes indices on the rule of law, the quality of bureaucracy, and the risk of government repudiation of contracts.

investors, and governments that are not attractive to foreign investors may be reasonably effective in implementing their own projects. Nevertheless, the lack of correlation of project performance with other indicators of government efficacy does raise questions.

In earlier work on the effect of policy distortion variables--e.g., the black market premia--on project performance (Isham and Kaufmann 1995), it has been argued that the ERRs of World Bank-financed projects are reasonably representative of overall investment performance. How closely related are overall returns to capital and these ERRs? This is difficult to answer, as the economy-wide return to capital is almost never measured.

A simple growth accounting exercise can partially circumvent this measurement problem. Suppose that growth of output per worker can be decomposed into the growth of capital per worker and a residual,  $\dot{y} = \alpha_k \cdot \dot{k}$ , (where lower case letters represent per worker and the dot represents the percentage time rate of growth). In the simplest neoclassical framework, the coefficient on capital is just the share of capital total output,  $\alpha_k = \frac{r \cdot K}{Y}$ . Now  $r$ , the return on capital, is not observed and so the entire share (the product) is inferred from regression or national accounts data. However, we hypothesize that  $r$  for each country  $i$  varies systematically across countries with the observed rate of return on projects, ERR:

$$r_i = \bar{r} + \beta \cdot ERR_i$$

We can combine these three equations and estimate the following equation:

$$\dot{y} = \bar{r} + \left(\frac{K}{Y}\right) \cdot \dot{k} + \beta \cdot ERR + \left(\frac{K}{Y}\right) \cdot \dot{k}$$

so that the first term identifies the average rate of return to capital and the second parameter the impact of an increase in ERR on the overall return to capital.

The results of estimating this equation using cross national data are presented in table 8. The estimated average return varies between 10.2 and 17.8 percent, a reasonable range of values. The impact of ERR on the overall rate of return is between 0.44 and 1.08 (with just two countries excluded). The estimates suggest that the return on Bank projects, the ERR is related one-for-one to the economy-wide rate of return which suggests it is a very good proxy for overall investment performance. This small piece of econometric evidence fortifies the arguments in earlier work for the use of the ERR as an indicator of the economy-wide rate of return. However, the multicollinearity problems in identifying the interactive term are extremely severe. With just two variables, over 50 percent of the overall growth rate variance is explained and hence the F-tests of joint exclusion are overwhelming. However, the estimates of each term individually are very imprecise and cannot reject zero (or any other value for that matter) for the individual terms. We are obviously not happy with this, but see no solution.

| Table 8: Relationship of overall returns to capital and the country average of project rates of return (ERR).  |                             |                               |   |                               |
|--|-----------------------------|-------------------------------|---|-------------------------------|
|  | Unweighted                  |                               | Weighted by number of projects <sup>a</sup> |                               |
|  | Full                        | Without outliers <sup>b</sup> | Full  | Without outliers <sup>b</sup> |
| Return to capital  | .178<br>(.107) <sup>c</sup> | .102<br>(.116)                | .163<br>(.119)                              | .106<br>(.878)                |
| Impact of ERR on return to capital   | .439<br>(.750)              | 1.08<br>(.821)                | .626<br>(.705)                              | 1.06<br>(.722)                |
| <i>R-Squared</i>   | .450                        | .507                          | .345 <sup>d</sup>                           | .506 <sup>d</sup>             |
| N  | 39                          | 37                            | 39  | 37                            |
| Notes: a) observations are weighted by the square root of the number of projects, b) the two outliers excluded are Syria and Pakistan, c) standard errors in parentheses, d) R-squared of the unweighted dependent variable.<br>Source: Authors' calculations. |                             |                               |   |                               |

## Conclusion

No one would pretend that the degree of civil or political liberties or the choice of political regime is--or ought to be--based on an assessment of strictly economic costs and benefits. What is often meant by the definition of human rights are exactly those elements of the interaction of human beings that go beyond any social welfare calculus.

That said, we have presented empirical evidence that, beyond their intrinsic merit, civil liberties have direct instrumental benefits in improving the performance of at least a subset of government investment projects, those financed by the World Bank. We believe that this is an additional piece of evidence for the view that increasing public voice and accountability--through both participation and better governance--can lead to greater efficacy in government action,

including development assistance (Picciotto 1995; OECD 1995).

On the other hand, the empirical evidence does not provide evidence of a relationship between democracy and the particular performance indicator that we examine (although we hasten to emphasize the statistical fact that lack of evidence *for* is not necessarily evidence *against*). This merely suggests with microeconomic data that which is known from aggregate data: while some authoritarian governments have not provided economic benefits, other countries under authoritarian regimes (particularly in East Asia) have experienced efficacious governments, widespread economic growth, and enormous reductions on poverty.

## References

- Alesina, Alberto, Sule Özler, Nouriel Roubini and Philip Swagel. 1992. Political Instability and Economic Growth. NBER Working Paper No. 4173 (September). Cambridge, Mass.: National Bureau of Economic Research.
- Alesina, Alberto and Roberto Perotti. 1993. Income Distribution, Political Instability, and Investment. NBER Working Paper No. 4486 (October). Cambridge, Mass.: National Bureau of Economic Research.
- Alesina, Alberto and Roberto Perotti. 1994. The Political Economy of Growth: A Critical Survey of the Recent Literature. *World Bank Economic Review* 8(3): 351-373.
- Banks, Arthur S. 1979 (and subsequent updates). Cross-National Time Series Data Archive. Center for Social Analysis, State University of New York at Binghamton.
- Barro, Robert. 1994. "Democracy and Growth." NBER Working Paper No. 4909 (October). Cambridge, Mass.: National Bureau of Economic Research.
- Bhalla, Surjit. 1994. Freedom and Economic Growth: A Virtuous Cycle." Mimeo.
- Brautigam, Deborah. 1992. Governance, Economy, and Foreign Aid. *Studies in Comparative International Development* (Fall) 27, 3: 3-25.
- Coppedge, Michael and Wolfgang H. Reinicke. 1990. Measuring Polyarchy. *Studies in Comparative International Development* (Spring) 25, 1: 51-72.
- Dollar, David. 1992. "Outward-Oriented Developing Economies Really Do Grow More Rapidly: Evidence from 95 LDCs, 1976 - 1985." *Economic Development and Cultural Change* 40: 523-44.
- Dreze, Jean and Amartya Sen. 1989. *Hunger and Public Action*. New York: Oxford University Press
- Gastil, Raymond. 1987. *Freedom in the World: Political Rights and Civil Liberties*. New York: Greenwood Press.
- Greir, Kevin B. and Gordon Tullock. 1989. An Empirical Analysis of Cross-National Economic Growth, 1951-1980. *Journal of Monetary Economics* 24, 259-276.
- Greene, William H. 1981. On the Asymptotic Bias of the Ordinary Least Squares Estimator of the Tobit Model. *Econometrica*, 49, 3: 505-513.

- Haggard, Stephan and Steven B. Webb. 1994. *Voting for Reform: Democracy, Liberalization, and Economic Adjustment*. New York: Oxford University Press.
- Helliwell, John. 1992. "Empirical Linkages Between Democracy and Growth," NBER Working Paper No. 4066 (May). Cambridge, Mass.: National Bureau of Economic Research.
- Humana, Charles. 1986. *World Human Rights Guide*. London: Hodder and Stoughton.
- Isham, Jonathan and Daniel Kaufmann. 1992. Does Policy Based Lending Affect the Productivity of Investment Projects? Background paper for *Adjustment Lending and Mobilization of Private and Public Resources for Growth*. Washington: The World Bank.
- \_\_\_\_\_, and \_\_\_\_\_. 1995. "The Forgotten Rationale for Policy Reform: The Productivity of Investment Projects" Policy Research Working Paper 1549. Washington: The World Bank.
- \_\_\_\_\_, Deepa Narayan and Lant Pritchett. 1995. Does Participation Improve Performance: Establishing Causality with Subjective Data. *The World Bank Economic Review* 9(2):175-200
- Kaufmann, Daniel, and Yan Wang, 1995. "Macroeconomic Policies and Project Performance in the Social Sectors." *World Development* 23(5):751-765.
- Kilby, Christopher. 1995. "Risk Management: An Econometric Investigation of Project Level-Factors." Background paper for *The Annual Review of Evaluation Results 1994*. Washington: The World Bank.
- Knack, Stephen and Philip Keefer. 1995. Institutions and Economic Performance: Cross-Country Tests using Alternative institutional Measures. *Economics and Politics* 7(3): 207-228.
- Kormendi and Meguire. 1985. Macroeconomic Determinants of Growth. *Journal of Monetary Economics* 16:141-163.
- Korten, Frances F. And Robert Siy, Jr., eds. 1988. *Transforming Bureaucracy: The Experience of the Philippine National Irrigation Administration*. West Hartford, Conn.: Kumarian Press.
- Little, I.M.D. and J.A. Mirrlees. 1991. Project Appraisal and Planning Twenty Years On. *Proceedings of the World Bank Annual Conference on Development Economics 1990*. 351-82.

- Mauro, Paulo. 1995. Corruption, Country Risk and Growth. *Quarterly Journal of Economics*, 110: 681-712.
- Organization for Economic Cooperation and Development. 1995. Participatory Development and Good Governance. Development Co-operation Guideline Series. Paris: OECD.
- Paul, Samuel. 1992. Accountability in Public Services: Exit, Voice, and Control. *World Development*.
- \_\_\_\_\_. 1994. Does Voice Matter? Policy Research Working Paper No. 1388. Finance and Private Sector Division. Washington: the World Bank.
- \_\_\_\_\_. 1996. A Citizen Report Card on Public Services: Mixing Barks and Bites? Mimeo.
- Picciotto, Robert. 1995. Putting Institutional Economics to Work: From Participation to Governance. Discussion paper 304. Washington: World Bank.
- Pohl, Gerhard, and Dubravko Mihaljek. 1992, Project Evaluation and Uncertainty in Practice: A Statistical Analysis of Rate-of-Return Divergences in 1,015 World Bank Projects, *World Bank Economic Review* 6(2):255-277.
- Pourgerami, Abbas. 1988. The Political Economy of Development: a Cross-National Causality Test of Development-Democracy-Growth Hypothesis. *Public Choice* 58:123-141.
- Pritchett, Lant H. and Lawrence H. Summers, 1993, The Structural Adjustment Debate *American Economic Review* 83:383-89.
- Putnam, Robert with Robert Leonardi and Raffaella Nanetti. 1993. *Making Democracy Work*. Princeton: Princeton University Press.
- Scully, Gerald W. 1988. The Institutional Framework and Economic Development. *Journal of Political Economy* 96(3):652-62.
- Squire, Lyn and Herman van der Tak. 1975. *Economic Analysis of Projects*. Baltimore: Johns Hopkins Press.
- Taylor, Charles Lewis and David A. Jodice. 1983 *World handbook of political and social indicators*. New Haven: Yale University Press.
- Wade, Robert. 1994. Public Bureaucracy and the Incentive Problem. Background paper for *World Development Report 1994*.



Weede, Erich. 1983. The Impact of Democracy on Economic Growth: Some Evidence from Cross-National Analysis. *Kyklos* 36(1):21-39.

World Bank. 1992. *Governance and Development*. Washington, D.C.: World Bank.

\_\_\_\_\_. 1993. *Annual Evaluation Results for 1991*. Washington, D.C.: World Bank.

\_\_\_\_\_. 1994. *World Development Report 1994*. New York: Oxford University Press.

\_\_\_\_\_. 1995. *The World Bank and Participation*. Operations Policy Department, World Bank.

| Appendix Table A.1: Summary statistics of independent variables <sup>a</sup>   |       |                    |                  |                     |           |
|--|-------|--------------------|------------------|---------------------|-----------|
| Variable name <sup>b</sup>   | Mean  | Standard Deviation | Range (Possible) | Number of countries | Years     |
| A) Civil liberties   |       |                    |                  |                     |           |
| Freedom House (Civil)  | 4.68  | 1.47               | (1 to 7)         | 56                  | 1974-1990 |
| Humana   | 55.13 | 17.97              | (13 to 91)       | 38                  | 1986      |
| Media Pluralism  | 2.50  | 0.91               | (1 to 4)         | 56                  | 1985      |
| Freedom to organize  | 2.45  | 1.12               | (1 to 4)         | 56                  | 1985      |
| B) Political Rights  |       |                    |                  |                     |           |
| Freedom House (Political)  | 4.73  | 1.85               | (1 to 7)         | 55                  | 1974-1990 |
| Alesina Democracy Index  | 2.52  | 0.79               | (1 to 3)         | 55                  | 1974-1982 |
| C) Indicators of Civil Unrest  |       |                    |                  |                     |           |
| Riots  | 0.14  | 1.61               | (-3.83 to 17.50) | 56                  | 1974-1989 |
| Protest Demonstrations   | 0.29  | 1.63               | (-0.79 to 14.54) | 56                  | 1974-1989 |
| Strikes  | 0.07  | 0.50               | (-0.43 to 3.50)  | 56                  | 1974-1989 |
| Notes: a) Summary statistics from 1974 to 1990 for the 56 countries with projects in Tobit and IV specifications; b) Data sources in the text and in the list of references.<br>Source: Authors' calculations. |       |                    |                  |                     |           |